

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GHEORGHE S. STAN, and JOHANNUS L. BAKX

Appeal No. 1998-0591
Application 08/538,517¹

ON BRIEF

Before McKELVEY, Senior Administrative Patent Judge, and
SCHAFFER and LEE, Administrative Patent Judges.

LEE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's rejection of appellants' claims 12-20 and 22-31. Claims 12 and 19 are independent claims.

References relied on by the Examiner

Syracuse Patent No. 4,750,059 June 7, 1988

The Rejections on Appeal

¹ Application for patent filed October 3, 1995.

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Claims 12 and 13 stand rejected under 35 U.S.C. § 102(b)
as being anticipated by Syracuse. (Paper No. 15, page 7).

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Claims 12-20 and 22-31 stand rejected under 35 U.S.C. § 112, first paragraph, as not being supported by an enabling disclosure. (Paper No. 15, page 6).

The following rejections have been withdrawn by the examiner (Paper No. 15, page 3): (1) the rejection of claims 12-31 under 35 U.S.C. § 112, first paragraph, as being without written description in the original disclosure (new matter rejection); (2) the rejection of claims 12-31 under 35 U.S.C. § 112, second paragraph, as being indefinite; and (3) the rejection of claims 14-18 under 35 U.S.C. § 102(b) as being anticipated by Syracuse.

The Invention

The invention is directed to a device for scanning an information track on a disc-shaped information carrier.

Claims 12 and 19 are reproduced below:

12. A device for scanning an information track on a disc-shaped information carrier, comprising:

scanning means for scanning a location on the information track,

drive means for causing relative rotation at an angular velocity between the location and the information carrier, about a point of rotation, the location thereby

having a linear velocity of relative movement along the track,

means for varying a distance (r) between said location and the point of rotation, and

control means for controlling the drive means and the means for varying,

characterized in that said control means is arranged to control the drive means so as to cause the relative angular velocity to decrease substantially with increasing distance (r), and to cause the linear velocity to increase substantially with increasing distance (r).

19. A device for scanning an information track on a disc-shaped information carrier, where said track includes an innermost track, an outermost track, and a multiplicity of tracks therebetween, comprising:

scanning means for scanning a location on the information track,

drive means for causing relative rotation at an angular velocity between the location and the information carrier, about a point of rotation, the location thereby having a linear velocity of relative movement along the track,

means for varying a distance (r) between said location and the point of rotation, and

control means for controlling the drive means and the means for varying,

characterized in that said control means is arranged to control the drive means so as to cause the relative angular velocity to decrease substantially, but less than inversely with the increase of distance (r), as said location is moved from said innermost track to said outermost track; and to cause the linear velocity to increase substantially, but less than proportionally with the increase of distance (r), as said location is moved from said innermost track to said outermost track.

Opinion

The rejection of claims 12 and 13 as being anticipated by Syracuse cannot be sustained.

The rejection of claims 12-20 and 22-31 as not being supported by an enabling disclosure also cannot be sustained.

A reversal of the rejection over prior art should not be construed as an affirmative indication that the appellants' claims are patentable over prior art. We address only the positions and rationale as set forth by the examiner and on which the examiner's rejection of the claims on appeal is based.

The Anticipation Rejection

According to claim 12, the control means controls the drive means such that with increasing distance " r " from the

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point of rotation of the disc to the scanning location, (a) the angular velocity decreases substantially, and (b) the linear velocity increases substantially. Claim 13 depends from claim 12.

The examiner has failed to set forth a prima facie case of anticipation.

Anticipation is established only when a single prior art reference discloses, either expressly or under the principles of inherency, each and every element of the claimed invention. In re Spada, 911 F.2d 705, 707, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed.Cir. 1984). See also In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986); Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984). The prior art reference must either expressly or inherently describe each and every limitation in a claim. Verdegaal Bros. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987).

The examiner explained (Paper No. 15, page 7) that in column 2, lines 15-22, Syracuse states that as the radius increases, the angular velocity for a given zone decreases. That is correct. However, that is not all the appellants' claim 12 requires. Specifically, claim 12 also requires that as the radius increases, the linear velocity must increase substantially. In that regard, the examiner pointed out (Paper No. 15, page 7) that "within a given zone of constant angular velocity, the linear velocity must increase, by definition." That observation, however, is not sufficient to support the anticipation rejection, because within each zone of constant angular velocity the angular velocity is not decreased as the radius "r" is increased.

Claim 12 requires that as the radius "r" is increased, the angular velocity is decreased and the linear velocity is increased. An increase in the radius "r" is associated with a decrease in angular velocity and an increase in linear velocity. That follows from a plain reading of the claim language and the examiner has not pointed to anything in the appellants' specification which indicates otherwise.

Consequently, the examiner has not made out a prima facie case of anticipation. To satisfy the limitations of claim 12, the examiner referred to an increase in the linear velocity within a zone of constant angular velocity. That is not sufficient to meet the requirement of claim 12 that as radius "r" increases, the linear velocity increases substantially and the angular velocity decreases substantially.

Accordingly, the anticipation rejection of claims 12 and 13 cannot be sustained.

The Lack of Enabling Disclosure Rejection

The examiner finds problematic the fact that no specific description is contained in the specification for the internal structure of the disclosed control means 4. The examiner referred to the corresponding disclosure as "a single black box 4" (Paper No. 15, page 5). The examiner further stated that the disclosure does not discuss how conventional systems "can be modified to produce the desired velocity curves illustrated in Figures 4a, 4b, 5 and 6, which are shown in a vague schematic drawing to be discontinuous at various and sundry amplitude levels and radius values."

We find the examiner's explanation to be misplaced. The specific curves of Figures 4a, 4b, 5 and 6 are evidently not recited in the appellants' claims. At least the examiner did not point out where in the claims is there a recitation for those curves. What the examiner did point out is that the control means of claim 12 is arranged to control the drive means so as to cause the relative angular velocity to decrease substantially with increasing distance (r) and to cause the linear velocity to increase substantially with increasing distance (r). The examiner also pointed out that according to claim 19, the decrease in angular velocity is less than inversely with the increase of distance (r), and the increase in linear velocity is less than proportionally with the increase of distance (r).

In any event, we do not find Figures 4a, 4b, 5 and 6 to be excessively vague. To the contrary, we find that they provide helpful illustrations of various relationships between the radius " r " and the angular velocity, and between the radius " r " and the linear velocity. For instance, with respect to Figure 4a, the horizontal line 31 depicts the angular velocity in a constant angular velocity system (CAN)

as the radius "r" goes from a minimum value to a maximum value, and the curved line 32 depicts the angular velocity in a constant linear velocity system (C.V.) as the radius goes from minimum to maximum. For the purpose intended, there is no need for the Figures to illustrate specific quantitative values for either angular velocity, linear velocity, or radius. On page 6 of the specification from lines 22-24, it is stated that in between the extremes defined by lines 31 and 32 lie the area 30 including the velocity curves that fit the various embodiments disclosed in the specification. The illustrations are quite informative.

It cannot be reasonably argued that one with ordinary skill in the art would not know how to get a velocity curve to fall between the extreme borders defined by lines 31 and 32 in Figure 4a. The examiner has not made any reasonable explanation to establish that after reading the appellants' specification it would still require undue experimentation by one with ordinary skill in the art to fit a curve between borders 31 and 32.

Claim 12 specifies that as the radius "r" increases, one would want the angular velocity to decrease and the linear

velocity to increase. If the same angular velocity is kept while the radius "r" of the scanning location is increased, the linear velocity necessarily increases. Thus, one with ordinary skill in the art need only cause the angular velocity to be slowed, but not so slowed that the increase in linear velocity is significantly reduced. Claim 19 gives a more specific criteria, i.e., the angular velocity is decreased substantially but less than inversely with the increase in the distance "r," and the increase in linear velocity is increased substantially but less than proportionally with the increase in the distance "r."

The examiner has not presented persuasive reasoning as to why one with ordinary skill in the art would be unable, without undue experimentation, to control the speed of a rotational drive means, i.e., to cause a motor to slow or speed up to varying degrees of angular velocity depending on the placement of the scanning location.

Moreover, the discussion on the appellants' brief beginning from the bottom of page 8 to the middle of page 10 is particularly on point. For instance, on page 9, from lines 5-15, the appellants state:

To spin the disc, motor 3 is adequately disclosed. In the Fig. 2 embodiment, the desired velocity is defined by using the distance signal 21 from sensor 20 to select a speed signal from a table, or by calculating in an arithmetic unit or analog signal processor (page 5, lines 4-9). The present velocity is obtained as signal 14 from the drive motor 3. Control means 4 simply compares the desired and present velocity signals, and uses the difference to cause the motor 3 to accelerate or decelerate. This is a very well known motor speed servo loop. In other embodiments the distance signal is provided, for example, by a coded signal which is read by the scanning head 2.

On this record, the examiner has not articulated a reasonable basis to doubt that the invention of claims 12-20 and 22-31 is enabled by the appellants' original disclosure. In particular, it has not been adequately explained by the examiner why it would take undue experimentation by one with ordinary skill in the art to control the motor speed based on the desired speed at the next scanning location and the current speed.

Conclusion

The rejection of claims 12 and 13 under 35 U.S.C. § 102(b) as being anticipated by Syracuse is reversed.

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The rejection of claims 12-20 and 22-31 under 35 U.S.C.
§ 112, first paragraph, as not being supported by an enabling
disclosure is reversed.

REVERSED

FRED E. McKELVEY, Senior)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
RICHARD E. SCHAFER)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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